## REMARKS

Claims 1-18 were pending in this application. By this amendment, claims 1-4 and 13-18 are canceled as drawn to non-elected Groups. Applicants expressly reserve the right to pursue protection of any or all of the subject matter in the canceled claims in a subsequent application.

*Specification Amendment*

The Specification has been amended to add a reference to the related cases.

*Claim Amendments*

Claims 5-10 have been amended to clarify that the vaccine preparation may optionally contain more than one peptide, comprising SEQ ID NO: 8 (IncA of *C. psittaci*), SEQ ID NO: 14 (IncA of *C. trachomatis*), or combinations of such peptides (see specification page 15, lines 19-21 for support). The remaining amendments to claims 5-10 are amendments of form only.

To the extent that any of the claims are viewed to be narrowed by the amendments made herein, Applicants reserve the right to pursue protection of the broader scope of the subject matter in this or a later-filed application.

*New claims*

By this amendment, new claims 19-30 have been added to the application. Support for new claims 19-30 can be found in the original claims, and throughout the specification. Specifically, support for the newly added claims can be found in at least the following locations:

| Claim | Original Claim | Support in Specification |
|---|---|---|
| 19 | 11 | Page 16, lines 25-26 |
| 20 | 12 | Page 16, lines 25-26 |
| 21 | 5 | Page 15, lines 27-30;<br>Page 2, lines 10-14, 33-34 |
| 22 | 6 | Page 15, lines 27-30;<br>Page 2, lines 10-14, 33-34 |
| 23 | 7 | Page 15, lines 27-30;<br>Page 2, lines 10-14, 33-34 |
| 24 | 8 | Page 15, lines 27-30;<br>Page 2, lines 10-14, 33-34 |

| | | |
|---|---|---|
| 25 | 9 | Page 15, lines 27-30;<br>Page 3, lines 27-31 |
| 26 | 10 | Page 15, lines 27-30;<br>Page 3, lines 27-31 |
| 27 | 11 | Page 2, lines 10-14, 33-34;<br>Page 3, lines 32-34 |
| 28 | 12 | Page 2, lines 10-14, 33-34;<br>Page 3, lines 32-34 |
| 29 | 11 | Page 2, lines 10-14, 33-34;<br>Page 16, lines 25-26 |
| 30 | 12 | Page 2, lines 10-14, 33-34;<br>Page 16, lines 25-26 |

No new matter has been added by these amendments.

After entry of this amendment, **claims 5-12 and 19-30 are pending in this application.**

*Restriction Requirement*:

In the Restriction Requirement, the Examiner alleges that the present application includes claims directed to 19 independent and distinct inventions. Applicants respectfully disagree, and request reconsideration in light of the amendments and remarks herein.

The application discloses infection-specific proteins from *Chlamydia*, and the generation of compositions including these proteins (or fragments of these proteins) for the induction of protective immune responses (see specification page 15, line 5 through page 16, line 26). At least one embodiment comprises a composition for generation of an immune response, which composition includes multiple infection-specific proteins (*e.g.*, a composition including both IncA *C. trachomatis* and IncA *C. psittaci* protein; see specification, page 15, lines 19-21, and claims 6-9).

In the amendments submitted herewith, claims 5-10 (Examiner's Group VI and Group VII) have been amended to specify that the vaccine composition disclosed optionally includes both infection-specific *C. trachomatis* and *C. psittaci* IncA proteins (SEQ ID NOs: 8 and 14). In addition, Applicants submit herewith new claims 19-30, which are all drawn to methods of generating an immune response using *C. psittaci* and *C. trachomatis* IncA proteins, as set forth

by Examiner's Groups VI and VII (see specification, page 16, lines 15-19, and original claims 6-9). Therefore, after entry of these amendments, all pending claims encompass Group VI, Group VII, and both Groups VI and VII, as they relate to compositions for the generation of immune responses that include the use of one or more infection-specific IncA proteins from *Chlamydia*. Thus, applicants submit that it is necessary to recombine Groups VI and VII to properly evaluate the pending claims.

**Conclusions**

It is respectfully submitted that the present application is in condition for substantive examination of claims 5-12 and 19-30. If it may further prosecution, the Examiner is invited to call the undersigned patent attorney at the telephone number listed below.

Respectfully submitted,

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**Marked-up Version of Amended Claims Pursuant to 37 C.F.R. §§ 1.121(b)-(c)**

5. (amended) A vaccine preparation comprising at least one purified peptide comprising at least 5 contiguous amino acids ~~selected from the group consisting~~ of an amino acid sequence as set forth as~~:~~

~~(a) SEQ ID NO: 2,~~

~~(b) SEQ ID NO: 4,~~

~~(c) SEQ ID NO: 6,~~

~~(d)~~ SEQ ID NO: 8~~,~~ or

~~(e) SEQ ID NO: 10,~~

~~(f) SEQ ID NO: 12,~~

~~(g)~~ SEQ ID NO: 14~~,~~

~~(h) SEQ ID NO: 16, and~~

~~(i) SEQ ID NO: 18~~.

6. (amended) The vaccine preparation of claim 5 wherein the at least one peptide comprises at least 10 contiguous amino acids of ~~at least one of the specified sequences~~ the amino acid sequence set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

7. (amended) The vaccine preparation of claim 5 wherein the at least one peptide comprises at least 15 contiguous amino acids of ~~at least one of the specified sequences~~ the amino acid sequence set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

8. (amended) The vaccine preparation of claim 5 wherein the at least one ~~purified~~ peptide comprises at least 20 contiguous amino acids of ~~at least one of the specified sequences~~ the amino acid sequence set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

9. (amended) A vaccine preparation comprising ~~an~~ at least one purified peptide comprising an amino acid sequence as set forth as ~~selected from the group consisting of:~~

~~(a) SEQ ID NO: 2,~~

~~(b) SEQ ID NO: 4,~~

~~(c) SEQ ID NO: 6,~~

~~(d)~~ SEQ ID NO: 8~~,~~ or

~~(e) SEQ ID NO: 10,~~

~~(f) SEQ ID NO: 12,~~

~~(g)~~ SEQ ID NO: 14~~,~~

~~(h) SEQ ID NO: 16,~~

~~(i) SEQ ID NO: 18,~~

~~(j) an amino acid sequence that differs from an amino acid sequence of (a) to (i) inclusive, by one or more conservative amino acid substitutions, and~~

~~(k) an amino acid sequence having at least 60% sequence identity to an amino acid sequence of (a) to (i) inclusive~~.

10. (amended) A method of making a vaccine comprising combining a pharmaceutically acceptable excipient with ~~a~~ at least one purified peptide having an amino acid sequence as set forth as ~~selected from the group consisting of:~~

~~(a) SEQ ID NO:2,~~

~~(b) SEQ ID NO:4,~~

~~(c) SEQ ID NO:6,~~

~~(d)~~ SEQ ID NO:8~~,~~ or

~~(e) SEQ ID NO:10,~~

~~(f) SEQ ID NO:12,~~

~~(g)~~ SEQ ID NO:14~~,~~

~~(h) SEQ ID NO:16,~~

~~(i) SEQ ID NO:18,~~

~~(j) an amino acid sequence that differs from an amino acid sequence of (a) to (i) inclusive, by one or more conservative amino acid substitutions,~~

~~(k) an amino acid sequence having at least 60% sequence identity to an amino acid sequence of (a) to (i) inclusive, and~~

~~(l) at least 10 contiguous amino acids from an amino acid sequence of (a) to (i) inclusive~~.

11. (reiterated) A method of vaccination, comprising administering a vaccine preparation according to claim 5 to a mammal.

12. (reiterated) A method of vaccination, comprising administering a vaccine preparation according to claim 9 to a mammal.

19. (new) The method of claim 11, wherein the mammal is a human.

20. (new) The method of claim 12, wherein the mammal is a human.

21. (new) A composition for inducing an immune response in a subject, comprising at least one purified peptide comprising at least 5 contiguous amino acids of an amino acid sequence as set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

22. (new) The composition of claim 21 wherein the sequence of the at least one peptide comprises at least 10 contiguous amino acids of at least one of the specified sequences.

23. (new) The composition of claim 21 wherein the sequence of the at least one peptide comprises at least 15 contiguous amino acids of at least one of the specified sequences.

24. (new) The composition of claim 21 wherein the sequence of the at least one peptide comprises at least 20 contiguous amino acids of at least one of the specified sequences.

25. (new) A composition for inducing an immune response comprising at least one purified peptide comprising an amino acid sequence as set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

26. (new) A method of making a composition for inducing an immune response comprising combining a pharmaceutically acceptable excipient with at least one purified peptide having an amino acid sequence as set forth as SEQ ID NO: 8 or SEQ ID NO: 14.

27. (new) A method of inducing an immune response in a subject, comprising administering a composition according to claim 21 to a mammal.

28. (new) A method of inducing an immune response in a subject, comprising administering a composition according to claim 24 to a mammal.

29. (new) The method of claim 26, wherein the mammal is a human.

30. (new) The method of claim 27, wherein the mammal is a human.